

COPY

M/047/007



**SF Phosphates Limited Company**

A Utah Limited Liability Company  
9401 North Hwy. 191  
Vernal, UT 84078-7802  
(435) 789-7795

April 11, 2001

3rd Submittal

Anthony Gallegos  
State of Utah  
Division of Oil, Gas, and Mining  
PO Box 145801  
Salt Lake City, Utah 84114-5801

RE: Reclamation Bond revision, SF Phosphates Limited Company, Vernal Phosphate Operations, M/047/007, Uintah County, Utah

Dear Mr. Gallegos:

Enclosed is a detailed review of the SF Phosphates reclamation surety estimate. Subject to your final review, we anticipate completing the surety process soon. We acknowledge additional surety amount will be added to the proposed figures to account for equipment mobilization, 10% contingency, site monitoring, and 5-year escalation. The \$15,000 figure proposed for 3-year DOGM site monitoring should be adequate.

If you have any questions please call at 435-781-3348 or e-mail to [Rryan@simplot.com](mailto:Rryan@simplot.com).

Sincerely,

Ron Ryan  
Environmental Specialist

RECEIVED

APR 12 2001

DIVISION OF  
OIL, GAS AND MINING

## Bond Review

The reclamation bond is comprised of calculations of estimated reclamation costs for each of 14 separate reclamation categories, as described below. Categories represent reclamation events involving similar tasks and activities, and therefore bearing similar unit costs for reclamation. Cost figures for reclamation categories are tabulated in Figure 1, Bond Summary. Unit cost estimates for specific reclamation tasks are taken from DOGM surety estimate tables.

**Mining Disturbance-active area:** All areas within the active mine that are disturbed and not fully reclaimed are included in this category. Disturbed area is surveyed at the end of each year, and areas calculated using the resulting Auto-CAD map of the surveyed area. The attached Reclamation Progress Map, Figure 2, dated January, 2001, displays the parcels included in the total acreage figure used in the bond summary calculation. The cost per acre rate is taken from DOGM estimates.

**Mine Operational Area:** This includes roads, conveyor right-of-ways, lay-down areas and other disturbed areas indirectly associated with mining. Parcels of 28.4 and 59 acres are indicated on the Reclamation Progress Map. These areas, in most part, will not be reclaimed within the predicted mine life.

**Mining Reclaimed:** Parcels that have been fully reclaimed but have not yet achieved the three-year minimum growth period required for bond release are included in this category. The majority of the reclamation work has been completed, and thus most of the reclamation costs have been incurred. Because the costs have already been incurred, the risk to the State is minimal. Costs included in the rate represent reseeding and fertilization only. Yearly inspections and the annual report and acreage tracking confirm mine reclamation and disturbance status. Acreage considered under future mining provides an additional level of security for the State.

**Future Mining:** This category provides a buffer for mine disturbance and represents additional acreage to be disturbed over the next three years. Three years future mining is more than adequate because of the concurrent reclamation method. Each year some portion of ground surface is disturbed, while some acreage is reclaimed, and other released from bond. Annual production estimates of 4,000,000 tons per years of ore from the 17.3 foot average ore seam thickness accounts for approximately 60 acres of disturbance per year. An additional 10 acres per year are included for peripheral disturbance. The division tracks progress through annual inspections and annual mining reports.

*Handwritten note:*  
2(60+10)  
OR  
10 IS INCLUDED  
IN THE 60?  
→ 70 ACRE/YR

Figure 3 calculates the current bond liability associated with the 4 categories of 'mining' disturbance described above. Each of the four categories described above are represented in the calculation, and a dollar figure representing the total maximum bond liability is calculated as 'Total Mine Disturbance Bond'. Also included in this spreadsheet is a disturbance cost scenario through the five-year bond period. Estimates of disturbed acreage and reclaimed acreage are entered for each of the upcoming five years, and acreage balances and bond liabilities are calculated. This allows a comparison between the surety bond figure and the actual bond liability at any given time. The \$1,273,013 figure under 'Total Mine Disturbance Bond' is compared to each of the annual summation figures listed under 'Total Year-end Cost'. At no

time does the projected bond liability approach the bond amount proposed for this revision. Actual acreage figures for active mine disturbance, mine reclamation, and bond release can be inserted into this spreadsheet each year to help track bond liability.

**SAG Mill and Mine Shop Area:** The areas encompassed by and immediately surrounding the SAG Mill and Mine Shop buildings are included in this category. Demolition and removal of the buildings themselves are included in the demolition category.

**Plant Facilities Area:** This represents the area encompassed by and immediately surrounding the concentrator mill and offices. Building demolition and removal is included separately, in the demolition category.

**Paved Roads:** This includes the paved access road to the mill offices and to the SAG mill and mine, and indicated on the attached map, Figure 4 and listed in table form as Figure 5. Acreages were measured using AutoCAD aerial topographic mapping performed in September 2000. Road widths were randomly field checked for accuracy.

**Unpaved Roads:** Unpaved roads ancillary to the mill, tailings pond, and the mine, as indicated on the attached map, Figure 4, and listed in table form as Figure 5. Acreages were measured using AutoCAD aerial topographic mapping performed in September 2000. Road widths were randomly field checked for accuracy.

**Tailings Pond - Miscellaneous Areas:** This category includes all disturbed area required for access and monitoring around the tailings pond and for the dam crest and sand beach. The area parcels included are summarized in Figure 6, and shown on Figure 4, Non-Mining Bond Acreages.

**Tailings Pond – Impounded Material:** This represents disturbance occurring from inundation of tails water and deposition of tails solids. The acreage figure is that area that will be affected at the end of the five-year bond period. This is the maximum area involved during the bond and is estimated very conservatively in the State's favor. Because none of this area can be reclaimed prior to closure and drainage of the pond, the disturbed area will continue to grow, and a three-year bond acreage is not appropriate. The method used to estimate the pond level at the end of the five-year bond period is as follows:

- 1) Estimate the 2006' pond elevation: The current pond elevation is approximately 5935' above mean sea level. Pond level has historically increased 4 ft per year. Future pond elevation increases are expected to be less than the 4 ft per year observed rate, largely because of increasing pond surface area in proportion to elevation. At 4 ft per year, the elevation in 5 years would be 5955 ft. A similar elevation estimate using predicted production and recovery rates to calculate pond volumes indicates a 5953' level in 2006.
- 2) Define a method to relate elevation to surface area: Figure 7, *Area vs. Elevation* graph, is constructed from AutoCAD map measurements of areas affected at different elevations.
- 3) Find the disturbed area at the given elevation: From the *Area vs. Elevation* graph, 317 acres would be affected at the 5955' elevation.

**Pipeline:** This area figure represents an estimate of the maximum area that would be re-disturbed due to pipeline decommissioning or repair at final reclamation.

**Landfill:**

Closure of the SF Phosphates landfill facility will commence after the landfill area is full. The estimated time to closure is approximately 20 years. Closure procedures will begin within 30 days after covering the final volume of waste. SF would need to post a bond with the Utah Division of Solid and Hazardous (UDSHW) for the 30-year post reclamation landfill monitoring prior to DOGM's final release of the reclamation bond. This could take place after the typical DOGM 3-year revegetation success monitoring, but prior to DOGM final release of the bond. The bond acreage and cost rate reflect reclamation as detailed in the closure plan submitted to the UDSHW.

**Demolition:**

Demolition and removal of all buildings, structures, and foundations are including in this estimate. Figure 8 is a table listing individual facilities and the demolition cost estimate associated with each.

1/26/00 RALPH BOWN, SOLID & HAZ. WASTE  
- BONDING FOR POST CLOSURE MONITORING  
- FOR 30 YR EROSION CONTROL  
- POST SEPARATE MONITORING 30-YR BOND  
AFTER DOGM RELEASE  
- CC DOGM LETTER TO DENNIS R. DOWNS -

**Figure 1: BOND SUMMARY**

**Current Bond Calculation:**

Category	Acres	\$/acre	Bond \$ Figure
Mining Disturbance	313.9	2064	\$647,890
Mining Reclaimed — FULL RECLAIMED	147.8	229	\$33,846
Future Mining — WAS 180	210	2064	\$433,440
Mine Operations Area $59 + 28.4 = 87.4$	87.4	1769	\$154,611
SAG Mill and Mine Shop Area $15 + 6.2 = 21.2$	21.2	1093	\$23,172
Plant Facilities Area — 24	24	1003	\$24,072
Unpaved Roads — 42	42	1449	\$60,858
Paved Roads — 13.1	13.1	1880	\$24,628
Tailings Pond - Miscellaneous Areas 60.88	60.88	1812	\$110,315
Tailings Pond - Miscellaneous Areas Reclaimed 5.5	5.5	229	\$1,260
Tailings Pond - Impounded Material → 5 YRS FROM NOW	317	248	\$78,616
Pipeline	2.5	1297	\$3,243
Landfill — REGRADING, TOP SOIL, MULCH, SCRS	7.5	1795	\$13,463
Demolition			\$646,835
<b>TOTAL</b>	<b>1,252.78 ACRES</b>		<b>\$2,256,246</b>

Mining Disturbance Balance 2000  
 $= 238 - 12.9 + 70.1 + 180 = 475.2$   
 DOG M PANEL B  
 CACCS 10/20/2000  
 FROM ?

FROM DOG M ESTIMATE

WAS INCLUDED IN FIGURE 2, ACRES

**Previous Bond Calculations:**

Category	Acres	\$/acre	
Mining Disturbance			
Panel B	286.9	2064	\$592,162
Panel B Reclaimed	147.8	229	\$33,846
Panel C	27	2064	\$55,728
Panel C Miscellaneous	59	1770	\$104,430
Panel D	0		\$0
Panel D Miscellaneous	28.4	1770	\$50,268
Future Mining	180	2064	\$371,520
SAG Mill and Mine Shop Area	21.2	1093	\$23,172
Plant Facilities Area	24	1003	\$24,072
Unpaved Roads	42	1449	\$60,858
Paved Roads	13.1	1880	\$24,628
Tailings Pond - Miscellaneous Areas	60.88	1812	\$110,315
Tailings Pond - Miscellaneous Areas Reclaimed	5.5	229	\$1,260
Tailings Pond - Impounded Material	317	248	\$78,616
Pipeline	2.5	1297	\$3,243
Landfill	7.5	1795	\$13,463
Demolition			\$699,542
<b>TOTAL</b>	<b>1,222.78 ACRES</b>		<b>\$2,247,120</b>

729.1

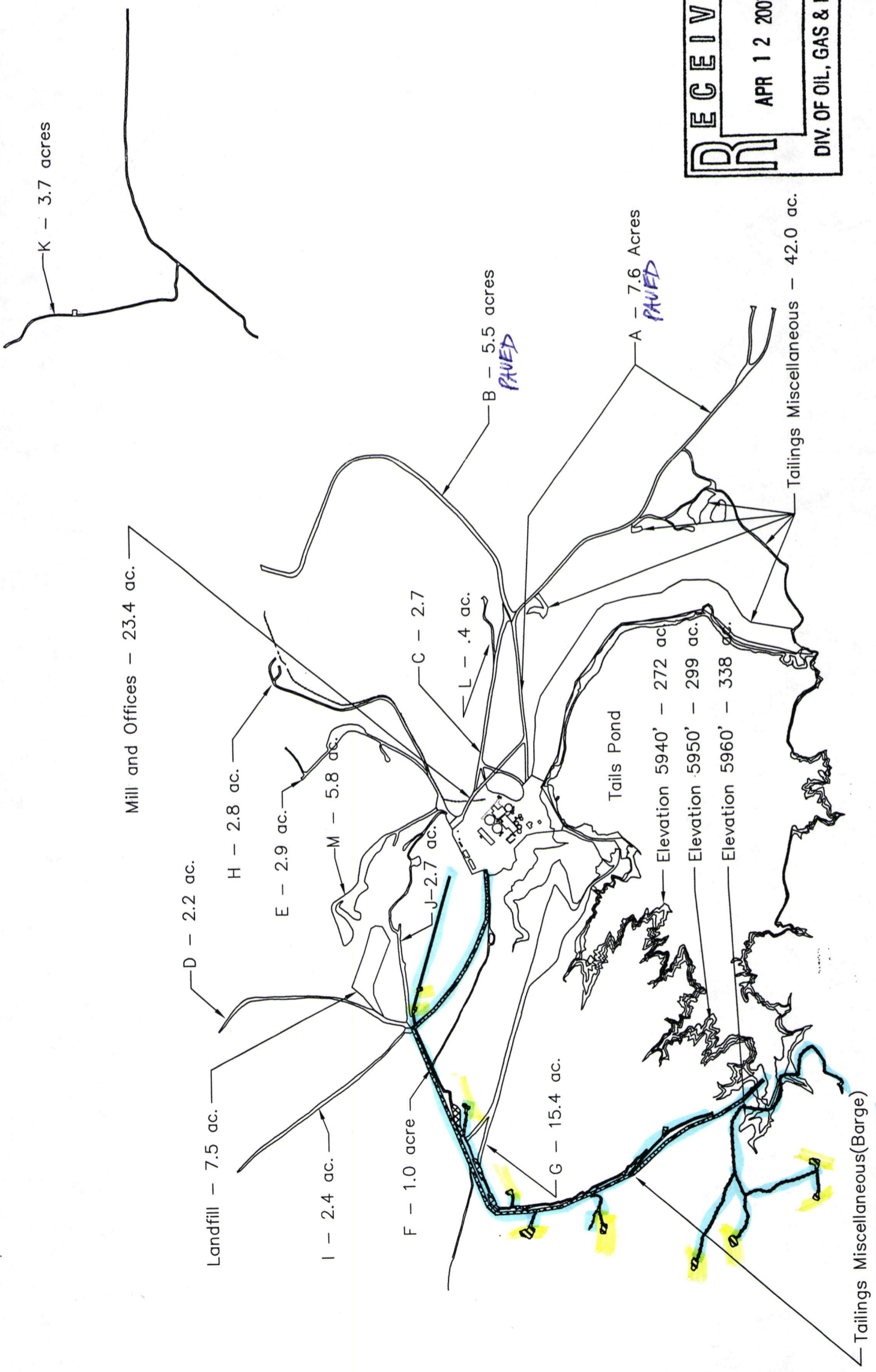
\$1,838/acre

313.90  
 87.40  
 248.65  
 649.95

	Mining Disturbance - Active Area					Mine Operational Area			Mining Reclaimed Area				Total		Future Mining			Total	
	Outstanding Disturbance Acres	New Disturbance Acres	Reclaimed Acres	Balance Acres	Reclamation Cost Rate	Balance Acres	Reclamation Cost Rate	Total Reclamation Cost	Released Acres	Balance Acres	Reclamation Cost Rate	Total Reclamation Cost	New Reclamation Acres	Total Reclamation Cost	Reclamation Cost Rate	Reclamation Cost	Reclamation Cost	Mine Disturbance Bond	Total Bond
CURRENT BOND LIABILITY:																			
2000	313.9			313.9	2064	87.4	1770	154698		147.8	248.65	36750		839,338	210	2064	433,440	1,272,778	
BOND TERM DISTURBANCE/LIABILITY SCENARIO																			
2001	313.9	70	40	343.9	2064	87.4	1770	154698	40	147.8	248.65	36750		839,338					
2002	343.9	70	40	373.9	2064	87.4	1770	154698	40	122.5	248.65	30460		894,967					
2003	373.9	70	40	403.9	2064	87.4	1770	154698	40	117.8	248.65	29291		955,719					
2004	403.9	70	40	433.9	2064	87.4	1770	154698	40	129.6	248.65	32225		1,020,573					
2005	433.9	70	40	463.9	2064	87.4	1770	154698	40	129.6	248.65	32225		1,082,493					
														1,144,413					

CURRENT STATUS 313.9 ACRES MINING DISTURBANCE 147.8 ACRES OF RECLAIMED/RELEASED AREA  $\Rightarrow$  461.7 ACRES DISTURBED  
 NEXT YEAR 461.7  $\rightarrow$  +70 ACRES DISTURBANCE +65.3 ACRES RECLAIMED +65.3 ACRES RELEASED  $\Rightarrow$  466.40 ACRES DISTURBED  
 "CURRENT BOND LIABILITY" 1,272,778 INCLUDES 70 ACRES OF FUTURE MINING (FUT-3 ACRES)  
 LIABILITY SCENARIO INCLUDES 70 ACRES OF FUTURE MINING  
 $\Rightarrow$  BONDING FOR ONE YEAR  
 - 1,144,413  
 1,272,778  
 5

Figure 3: Mining Disturbance Bond Liability Calculation and Future Disturbance Scenario



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**SF Phosphates L.C.**  
*A Utah Limited Liability Company*  
**VERNAL, UT**

**FIGURE 4**  
**Non-Mining Bond Acreages**  
**M/047/007**

AREA	4130	REVISION	A
DRAWN BY: RGR	SUPERVISOR: Ron Ryan	APPROVAL	DATE
DWG DATE: 1/3/01	DRWG SCALE: 1"= 1500 ft	MAINT. BY	
CAD FILE NO.	SHEET NO. 1 OF 1	OPER. BY	
CHARGE CODE:		ENGR. BY	
WORK ORDER#		MGMT. BY	

FIGURE 4  
- shows road networks  
(paved, unpaved)

## Figure 5: Roads Inventory

Road Description		2001	1984 Road Designation	1984
Map		Road		Road
Designation		Acreage * $\Delta$		Acreage
A	Paved road to mill/office area, both north and south forks.	7.61	Current Entrance	9.2
B	Paved road from fork to Mine and SAG Mill	5.47	SAG Mill	10
C	Dirt road along ratliff, part of original entrance.	2.69	Former entrance	3
D	Panel A from landfill	2.22	Panel A (1)	4.6
E	Panel A access	2.86	Panel A (2)	4.6
F	Cedar ridge road, boneyard reclaimed.	1.05	Boneyard & Disposal	1.5
G	Tailings dam construction borrow area.	15.43	Air Field and Access	9.6
H	Along slurry line south side.	2.77	Slurry Line	3.5
I	Camp Canyon - not active, partially regrown.	2.44	Camp Canyon	3.6
<b>NEW ROADS</b>		<u>42.94</u>		<u>49.6</u>
J	Road to Well D, water storage, etc.	2.67		
K	Road to wells B and H, east of Highway 191.	3.69		
L	Ratliff Spring	0.43		
M	Active Mill Boneyard	5.80		
<b>TOTAL PAVED ROADS</b>		<u>13.1</u>		
<b>TOTAL UNPAVED ROADS</b>		<u>42.0</u>		
		<u>55.1</u>		
* all 2001 acreages measured on autocad - see attached map				
<b>Expired Roads:</b>				
Panel A (3)	0.00	reclaimed	3.3	
Tailing Access	0.00	Included with Tailing Miscellaneous	4.9	
Catch & Slurry Dams	0.00	Counted with tailings - misc	0.8	
Stacker Access	0.00	Counted with Panel C and B miscellaneous	2.2	
Panel "C" Mine	0.00	counted with mining disturbance	1.8	
Upper Tails	0.00	Covered by tails pond	1.2	
			<u>14.2</u>	<u>63.8</u>

**FIGURE 6: Tailings Storage Facility Acreages**

**Tailings Misc acres disturbed:**

	acres
Dam crest and beach	36.93
Seepage collection	
north seepage	0.71
middle seepage	0.20
south seepage	1.59
access - includes catch dam and seepage	2.55
Barge area - unreclaimed	18.9
Barge Area - reclaimed	5.5 - 1444
<b>TOTAL AREA UNRECLAIMED</b>	<b>60.88</b>
<b>TOTAL AREA RECLAIMED</b>	<b>5.5</b>
	<u>66.38</u>

**FIGURE 7: Elevation VS Surface Acres  
SF Phosphates Tailings Storage Facility**

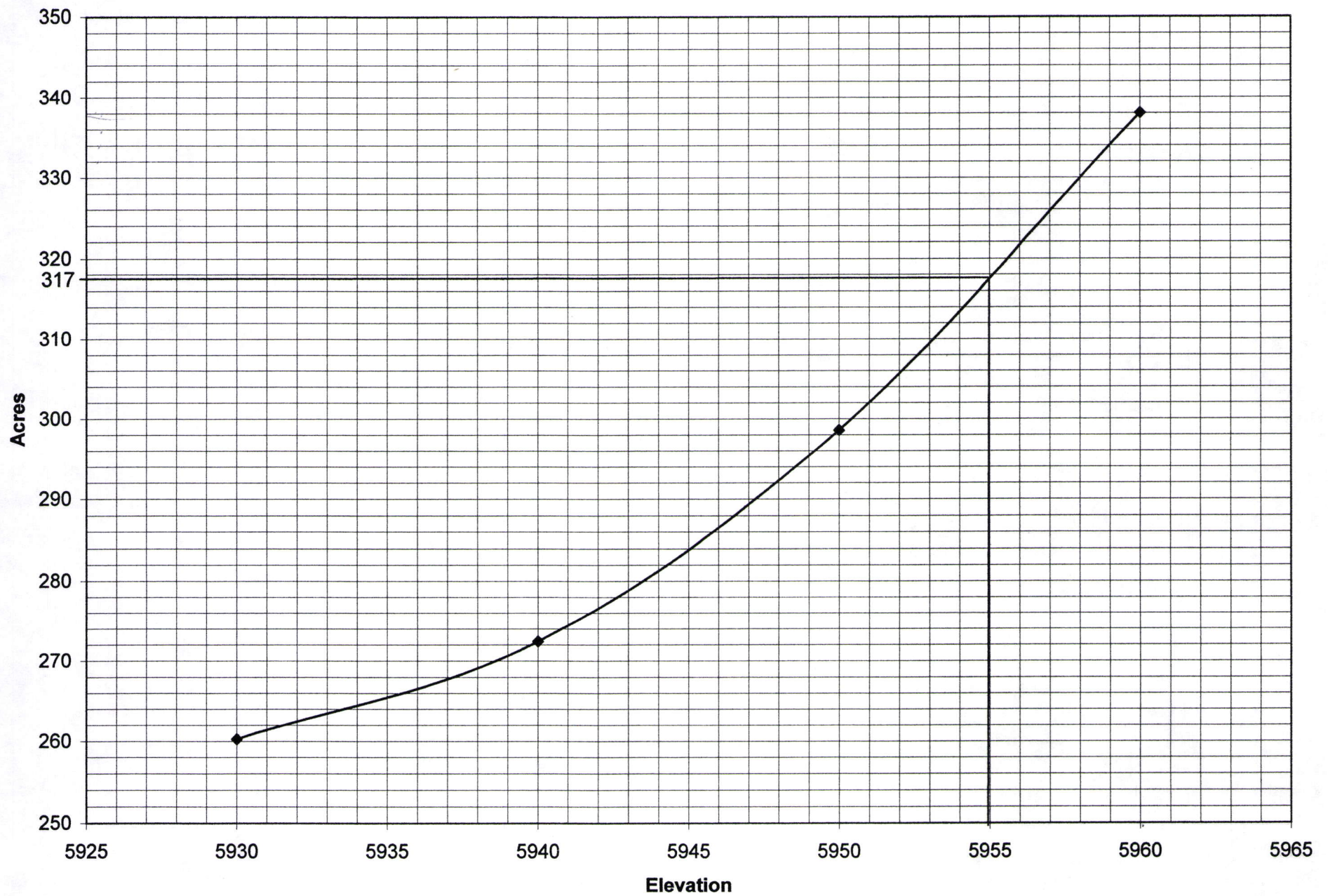


FIGURE 8: Demolition Cost Estimate

PAGE 1/2

NO HEAVILY REINFORCED  
CONCRETE?  
WHAT FOR?
$$\frac{\$37,357}{426,126 \text{ ft}^3} = 0.088 \text{ \$/ft}^3$$

$$0.5761 \text{ OF TOTAL COST?}$$

$$\text{LABOR}$$

$$\text{COSTS}$$

$$\text{BATE}$$

$$\text{COSTS}$$

$$\text{OF TOTAL COST?}$$

$$\text{d - WITH PRICE?}$$

$$\text{SHOW DOCUMENTATION}$$

	Buildings and Structures	Building Dimensions			Bldg Vol (cf)	Construct Descript.	Concrete slab 1ft thick Area (sq ft)	Concrete slab 2ft thick Area (sq ft)	Concrete Removal cost/sq ft	Concrete demo. cost (\$)	Means Daily production	Means rate bldg.	Bldg. Demo Cost (\$)	Total Cost (\$)	Means cost adjustment for Price, Utah		Comments
		L(ft)	W(ft)	H(ft)													
01	Mine Shop	173.25	61.49	40	426,126	mix	10,653		2.25	23,970	21500	1884.85	37,357	61,327		35,324	
	Mine oil shed	41.99	30.09	16	20,216	mix	632		2.25	1,421	21500	1884.85	1,772	3,194		1,840	
	Mine fuel storage	42.49	17.52	16	11,911	concrete	372		2.25	837	15300	1884.85	1,467	2,305		1,328	
	Stacker Shed	18.82	16.04	16	4,830	mix	151		2.25	340	21500	1884.85	423	763		440	
	Feeder brkr MCC	20.29	15.48	16	5,025	mix	157		2.25	353	21500	1884.85	441	794		457	
	Feeder brkr tool bldg	17.2	15.24	16	4,194	mix	131		2.25	295	21500	1884.85	368	663		382	
	Stacker					50 tons steel							33,250	33,250		19,152	
02	SAG Mill Build	146	92	65	873,080	steel		13432	4.5	60,444	21500	1884.85	76,541	136,985		78,903	
	SAG Warehouse	51.02	34.05	16	27,796	mix	1,737		2.25	3,909	21500	1884.85	2,437	6,346		3,655	
	SAG Switch gear	31	14.12	12	5,253	steel	219		2.25	492	21500	1884.85	460	953		549	
	SAG MCC	39.26	30.83	16	19,366	mix	605		2.25	1,362	21500	1884.85	1,698	3,059		1,762	
	Steady head tank	99.6	22.56	16	35,952	concrete	1,123			3,404	15,300	1884.85	4,429	7,833		4,512	
	Potable water bldg.	12.3	10.01	25	3,078	mix	62			187			7,387	7,574		4,363	
	Apron Feeder Tunnel				0	concrete	2,500			7,575				7,575		4,363	
	Reject Conveyor gallery				0	25 tons steel				0			16,625	16,625		9,576	
03	Office-Lab-warehouse	260.25	63.88	24	398,994		12,469		2.25	28,054	21500	1884.85	34,979	63,033		36,307	
	Rubber shop	130.71	41.53	24	130,281	steel	2,714		2.25	6,107	21500	1884.85	11,421	17,528		10,096	
	Elect. Shop	103.12	51.51	24	127,481	steel	2,656		2.25	5,976	21500	1884.85	11,176	17,152		9,879	
	Core Bldg	37.16	32.94	16	19,585	mix	612		2.25	1,377	21500	1884.85	1,717	3,094		1,782	
	Old Office Bldg	68.83	49.2	12	40,637	mix	1,693		2.25	3,810	21500	1884.85	3,563	7,372		4,246	
	Lay down Area				0					0			0	0		-	
04	Mill																
	Hydrosizer bldg	104.05	30.7	80	255,547	metal		3194.335	4.5	14,375	21500	1884.85	22,403	36,778		21,184	
	Primary flotation bldg	154.87	83.66	60	777,385	metal		12956.4242	4.5	58,304	21500	1884.85	68,151	126,455		72,838	
	Pump station	99.44	83.85	40	333,522	metal		8338.044	4.5	37,521	21500	1884.85	29,239	66,760		38,454	
	Scav. Grind	151.2	96.04	30	435,637	steel		14521.248	4.5	65,346	21500	1884.85	38,191	103,537		59,637	
	Scav Flotation	77.09	55.62	30	128,632	steel		4287.7458	4.5	19,295	21500	1884.85	11,277	30,572		17,609	
	Scav Section MCC	24	36	12	10,368	mix		864	4.5	3,888	21500	1884.85	909	4,797		2,763	
	West TeePee				0	20 tons steel				0			13,300	13,300		7,661	
	East TeePee				0	20 tons steel				0			13,300	13,300		7,661	
	Conc. TeePee				0	14 tons steel	8,000			24,240			9,310	33,550		19,325	
05	Tanks																
	No.1 Slurry Tank				0	16 tons steel	2,000		2.25	6,060			10,640	16,700		9,619	
	No.2 Slurry Tank				0	16 tons steel	2,000		2.25	6,060			10,640	16,700		9,619	
	No.3 Slurry Tank				0	16 tons steel	2,000		2.25	6,060			10,640	16,700		9,619	
	No.4 Slurry Tank				0	10 tons steel	970		2.25	2,939			6,650	9,589		5,523	
	No.5 Slurry Tank				0	10 tons steel	970		2.25	2,939			6,650	9,589		5,523	
	Reclaimn water Thick				0	5 tons steel				0			3,325	3,325		1,915	
	Slurry surge tank				0	16 tons steel				0			10,640	10,640		6,129	
	Reclaim water tank	100	50	20	100,000	concrete	11,000		2.25	33,330	15,300	1884.85	12,319	45,649		26,294	
	Fresh water tank 1				0	5 tons steel				0			3,325	3,325		1,915	
	Fresh water tank 2				0	5 tons steel				0			3,325	3,325		1,915	
	Potable water bldg	18	24	16	6,912	mix	216		2.25	486	21500	1884.85	606	1,092		629	
	Ratliff Spring Build	30	30	12	10,800	mix	2,250		2.25	5,063	21500	1884.85	947	6,009		3,461	
	water well A	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240		138	
	water well B	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240		138	

$$BID = \left( \frac{VOL}{PROD} \right) \left( \frac{DAIL PROD}{RATE} \right)$$

- FOR BUILDINGS WITH NO INTERIOR WALL DEDUCT 50%
- OMITTED TRUCK WALL - < 5 MIRES  $\frac{20}{100} = \frac{1}{5}$  WALL DIST
- APPLY 25% TO 2 DRIVERS & TRUCKS

Class P-8  
2 DRIVERS  
583.60/DAY  
2 TRUCKS  
1062.15/DAY

1,647.75

$$\Rightarrow \$411.94 \Delta = 1,235.81$$

5117.70  
- 1235.81  
\$3,881.89/DAY

$$\frac{\$ / D}{CF} = 0.18$$

0.09 \$/CF

NO CURRENT

# FIGURE 8 - PAGE 2/2

## DEMOLITION COST ESTIMATE

↓ 2- NO HEAVY REINFORCED CONCRETE?

Buildings and Structures	Building Dimensions			Bldg Vol (cf)	Construct Descript.	Concrete slab 1ft thick Area (sq ft)	Concrete slab 2ft thick Area (sq ft)	Concrete Removal cost/sq ft	Concrete demo. cost (\$)	Means Daily production	Means rate bldg.	Bldg. Demo Cost (\$)	Total Cost (\$)	Means cost adjustment for Price, Utah	Comments
	L(ft)	W(ft)	H(ft)												
water well C	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240	138	
water well D	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240	138	
water well E	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240	138	
water well H	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240	138	
Catch Dam pumphouse	12	14	10	1,680	mix	84		2.25	189	21500	1884.85	147	336	194	
Truck Scale	75	20		0	concrete	1,500		2.25	4,545			0	4,545	2,618	
Scale House	12	10	10	1,200	mix	60		2.25	135	21500	1884.85	105	240	138	
Conc. Bins				0	5 tons steel				0			3,325	3,325	1,915	
Jet Belt	350			0	14 tons steel				0			9,310	9,310	5,363	
Conveyor gallery 18	75			0	19 tons steel				0			12,469	12,469	7,182	
Conveyor gallery 18a	35			0	9 tons steel				0			5,819	5,819	3,352	
Conveyor gallery 3	150			0	38 tons steel				0			24,938	24,938	14,364	
Conveyor gallery 4	200			0	50 tons steel				0			33,250	33,250	19,152	
Conveyor gallery 13	200			0	50 tons steel				0			33,250	33,250	19,152	
Conveyor gallery 13a	25			0	6 tons steel				0			4,156	4,156	2,394	
Conveyor gallery 14	125			0	31 tons steel				0			20,781	20,781	11,970	

TOTAL \$ 646,834.62

Building demolition from RS Means' 2001 Heavy Construction Cost Data, adjusted for short haul distance and buildings lacking interior walls.

Concrete floor removal costs are from an estimate provided by Grant Mackay Demolition Company.

Steel cost estimates are from an example provided by DOGM.

\$2.25/FT<sup>2</sup> FOR 1FT THICK ⇒ \$2.25/CF ⇒ \$60.75/CY  
 \$4.50/FT<sup>2</sup> FOR 2FT THICK ⇒ \$2.25/CF ⇒ \$60.75/CY

### MEANS 2001 CITY COST INDEX

TOTAL

LOGAN 89.9

OGDEN 88.7

PROVO 90.0

SLE 89.6

AVG = 89.55

GRAND JCT., COLORADO = 85.9

### MEANS 2000

FROM 7-19-05-2.063  
 \$27/TON OF STEEL

SE ESTIMATE USING  $\frac{\$33,250}{50 \text{ tons}} = \$665/\text{ton}$

USE MEANS HVAC DEMO TO REPRESENT HEAVY ITEMS SELECTIVE DEMOLITION - HVAC DEMOLITION - CATEGORY DOES NOT COUNT IN 2001 VALUE

MEANS 2001 15055-300-3600 HEAVY MEANS \$690/ton

## FIGURE 6: Tailings Storage Facility Acreages

### Tailings Misc acres disturbed:

	acres
Dam crest and beach	36.93
Seepage collection	
north seepage	0.71
middle seepage	0.20
south seepage	1.59
access- includes catch dam and seepage	2.55
Barge area - unreclaimed	18.9
Barge Area - reclaimed	5.5 <sup>1999</sup>
<b>TOTAL AREA UNRECLAIMED</b>	60.88
<b>TOTAL AREA RECLAIMED</b>	5.5
	<hr/> 66.38